

# SEQUENCE LISTING

SEQ ID NO: 1 - hCARa sequence ACCESSION CAA83016

1 MASREDEL RN CVVCGDQATG YHFNAL TCEG CKGFFRRTVS K SIGPTCPFA  
GSCEVSKTQR

5 61 RHCPACRLQK CLDAGMRKDM ILSAEALALR RAKQAQRRAQ QTPVQLSKEQ  
EELIR TLLGA

121 HTRHMG TMFE QFVQFRPPAH LFIHHQPLPT LAPVLPLVTH FADINTFMVL  
QVIKFTKDLP

181 VFRSLPIEDQ ISLLKGAAVE ICHIVLNTTF CLQTQNFLCG PLRYTIEDGA

10 RVGFQVEFLE

241 LLFHFHGT LR KLQLQEPEYV LLAAMALFSP DRPGVTQRDE IDQLQEEMAL  
TLQSYIKGQQ

301 RRPRDRFLYA KLLGLLAE LR SINEAYGYQI QHIQGLSMM PLLQEICS

15 SEQ ID NO: 2 - mCAR $\beta$ 1, mCAR1, ACCESSION AAC53349

1 MTAMLTLET M ASEEY GPRN CVVCGDRATG YHFHAL TCEG CKGFFRRTVS  
KTIGPICPFA

61 GRCEVSKAQR RHCPACRLQK CLNVGMRKDM ILSAEALALR RARQAQRRAE  
KASLQLNQQQ

20 121 KELVQILLGA HTRHVGPLED QFVQFKPPAY LFMHHRPFQP RGPVLPLLTH  
FADINTFMVQ

181 QIIKFTKDLP LFRSLT MEDQ ISLLKGAAVE ILHISLNTTF CLQTENFFCG  
PLCYKMEDAV

241 HAGFQYEFLE SILHFHKNLK GLHLQEPEYV LMAATALFSP DRPGVTQREE

25 IDQLQEEMAL

301 ILNNHIMEQQ SRLQSRFLYA KLMGLLADLR SINNAYSYEL QRLEELSAMT  
PLLGEICS

SEQ ID NO: 3 mCAR $\beta$ 2 mCAR2, ACCESSION AAC53350

30 1 MTAMLTLET M ASEEY GPRN CVVCGDRATG YHFHAL TCEG CKGFFRRTVS  
KTIGPICPFA

61 GRCEVSKAQR RHCPACRLQK CLNVGMRKDM ILSAEALALR RARQAQRRAE  
KASLQLNQQQ

121 KELVQILLGA HTRHVGPLED QFVQFKPPAY LFMHHRPFQP RGPVLPLLTH  
FADINTFMVQ

181 QHKFTKDLP LFRSLTMEDQ ISLLKGAAVE ILHISLNTTF CLQTENFFCG  
PLCYKMEDAV

5 241 HAGFQYEFLE SILHFHKNLK GLHLQEPEYV LMAATALFSP GFCMQS

SEQ ID NO: 4 murine CAR $\beta$  genomic nucleotide sequence Section A

AAAATTTACCCAACATAGATTTATCTAATGTAATTCCTATCTGCAGAACATCCAA  
ATACTTTGGAAATTATTTNTTGTGGTTGTAGCTGTTTGAATGTAAACATATATTCA  
10 AAAAAACTCTTCATGGTGATGTAGCATTGGGCAAGCTATGAGGATACCTACTTCT  
GGTTATTTACTAAAAGTTGATAGCCAGGCAGTGGTGGCACACACCTTTAATCCCA  
GCACTTGGGAGGCAGAGGCAGGTGGAATTATGAGTTTGAGGCCAGCCTGGTCTA  
CAGAGTGGGTTC AAGGTCAGCCAGGGCTACACAGAGAAACCCTGTCTCAAAAAG  
AAGGAGGAGGAGGAGGAAAGAGGAAGAGGAGGAAGAAGATCTTTTGTTTTGAG  
15 ATAGCATACAGTGAAAATTTTCGGTTTCTTTAGCAACTCAGTTGTGTACATGATG  
TCTTTCTGGAAGCTGTCTTGTGAGCAGACATGTGATGTTTATCACAATAGAAAGC

SEQ ID NO: 5 murine CAR $\beta$  genomic nucleotide sequence Section B

AAAGAGGTCATCAGGCTTGGCAGCAAGTGCCTTTGCCTACCGAGTCTTTACACCA  
20 GCTCCACCGTGGTTTTTGTAGACAGTCTCCCACTGGACTGGATTTCAGCAAGAAAG  
CTAGGCTTGCCTTCTTGTCTCTGCCTCCTTGGCATTGGAATTATGAGTTGTTCCAC  
CGTGCCATTTTTTAAAAATGTAGGTTCTAGGAATTAACTCGGCTCTCGGTGCTTA  
TATAGTGAGTACTTTACAGAGGGAGTCACCTTGCCAGCACCTAGAATTCATTTT  
ATTCATATCCCAGTCTCCCCACGTAAGAAAGTGGGATCCCTTCTAGTGTTACACC  
25 TAAGTTCTTAGTTGGATAACGAAGTCTTTTTTTTAAACAGATCTCTGGGGCTCAGAA  
GGCAAGAGCTCCTTGCAGAGGATTTAACCTCAATTCCTAGTACTCAACTTGCCAG  
CTCATAACTGCCTATAACTCTAGTCCCAGAAGATCAGACATTGTCCTCTGATCTCT  
GTGGGTACTAGGTATATACATTTAAAAAAAATCAATAAAAAAATTTAAAAAAGA  
AAAGAAAAAGAAAGAAAGAAAATCCTTTGGGAGCCTGGTATAATTGTTATAGCT  
30 ACCTTTTTTTTTTTTTTTTTTTTTTTTTTTTACCATTGCAAACCTGCACGTGAAAAAG  
CTTGCCATCTCTCCCATTTGTTTCCTGGCTTATTCAGGATCCATGCAAAAAGGGGA  
GTGTAGATTTAGCCTAAAGCTCACCCACAGGGAAATCCTCCAGGAGTCTAGTAA  
GCAGCAGCTTTTAATGAGTCATGAGGTCCTGGCCCCCTCCCCATCTGCCACCAACC  
AACACTTCTCGGGCATGCTAGGAACCCCCACCCACCCACACCCACACCCAGGT

CTTTGCCCTGGGTCCAGAGTCTGGGTCCTACCTACATATGGCACCGAGGATACCT  
 AGAGGCCCCATGCAAGAGAAGGCCCTTGTTTTCCAGGCACTAAGGACCGCAGTC  
 CCTAATTCCTGGCAGTTCCTGAGATCTCAAGGAAAGCAGGGTCAGCGAGGAGGC  
 CTGGGGAGAGGAGGCATCCTACACCCGATCTTGTTGGCCTGCTGCCTAAGGGAAA  
 5 CAGGTAGGTAATCCGTTGGAGGCCAGAGACAAAAAGCAACATTTTTGCTTTTAAT  
 GTCCTCAGTGCTGGGGAGCCCGGTGTCAGGCTGGGCAGTCTTGGGAAGAGATTCT  
 GTAGAGGAGAGAGAAGAGAGTCTATGGCCCAGTGCTGATTCTCAACTCCTCCC  
 ACATTCAGGAGACCATGACAGCTATGCTAACACTAGAAACCATGGCCAGTGAAG  
 AAGAATATGGGCCGAGGAACTGTGTGGTGTGTGGAGACCGGGCCACAGGCTATC  
 10 ATTTCCACGCCCTGACTTGTGAGGGCTGCAAGGGCTTCTTCAGGTGAATGCTTCC  
 TCCCCAACAGAAACAACCCCGACATTTCTATCAGTCCACCTTTAAACACTGGTAC  
 ACCTCCAAGTTATAATCCTCTTGCAGCTAAGCTGCACTGCCCAGTGTCTAGCACT  
 CTCAATCTTGCTGACCACAACGCAGTGTGAACTGGTGACCTAATGACAAGGCA  
 GGTTAACCATTTGTCCCAGAGACAGAGCCTAAGAGTCAAGAACACTTGTGTAGC  
 15 ACACACTACCTGCAAAGCACCGAGATGATTGCCACACGAGGGTTCTTGAGTAAC  
 CTTGTGTTCTCATGAAAACGCTCCAACCTCTGAAGACCTTTGAGCACAGCTC  
 AGATGAGTCTGTTGTTAAATCGATCC

SEQ ID NO: 6 - murine CAR $\beta$  genomic nucleotide sequence -- Section C

20 TGCATTGCTTTCTACTGAAGTGTATCACAGATGAATATGAGATCGACAGAAAGTG  
 TGCAGGGATCCCCCTGCCATCTGGAAACACTTAATTCAATGAAGTCCCAAGGAA  
 GCCTCAGAAACTCTTTCTTCCTTCCTTCCTTATCTGGGGAGGTGGAGTGGCCC  
 CAACTGAAGGGATGGCTGAAAGGTGCTCGCTGCTGTTCTCAACAGCTTTGTCATC  
 TCTCTTGCTGACACAGTGATACTGTCAGCAGAAGCCCTGGCATTGCGGGCAGCC  
 25 AGACAGGCACAGCGGCGGGCAGAGAAAGCATCTTTGCAACTGAATCAGCAGCAG  
 AAAGAACTGGTCCAGATCCTCCTCGGGGCCCCAACTCGCCATGTGGGGCCCCATGT  
 TTGACCAGTTTGTGCAGTTCAAGGTGAGAACTTAACCAGGATGTGACCTGGGTAC  
 CTGAGGAGGTAACCCACAGAAGAAGGCTATGCCCTGATGGAGGACA

30 SEQ ID NO: 7- Sensor peptide sequence  
 ILRKLLQE

SEQ ID NO: 8- Hamster CAR nucleotide sequence

CTGTGTTTTCTAGGGACCAAGGACAATCCCTAATTCCCTGCAGTTCCTGAGACCACA  
 AGGAAAGCAGGGTCATCGTGGAGGCTTGGAGACAGGCATCTCATACCAGATTTT  
 GTGACCTGCGTGTGTCATACTGCCTAAGAGAAACAGGAGACCATGACAGCTACG  
 CTAACACTCGAAACCAAGGCCAGTGGAGAGGAATATGGACCGAGGAACTGTGTG  
 5 GTGTGTGGAGACCGAGCCACGGGCTACCATTTCATGCCCTGACTTGTGAGGGCT  
 GCAAAGGCTTCTTCAGACGAACTGTCAGCAAAACCATTAGTCCCATCTGTCCATT  
 TTCTGGAAGCTGTGAGATCAGCAGAGCCCAGAGACGCCACTGCCCAGCCTGCAG  
 GTTGCAAGAAGTGCCTAAACGCTGGCATGAGGAAAGACATGATACTGTCAGCAGA  
 AGCCCTGTCGTTGCGGCGAGCCAGGCAGGCACAGCGGCGGGCACAAAAAGCTTC  
 10 CGTGCAGATGACTCAGGAGCGGAAGGAGCTGGTCCAGACCCTCATAGGGGGCCCA  
 CACCCGCCACATGGGGCCCCATGTTTGACCAGTTTGTGAAGCTCAGGCCTCCAGCT  
 TACCTGTTACCCATCACCGGCCCTCCTCCCCGCTGGTCCCCCCCCGCGTTACCACT  
 GCTCACACACTTTGCAGATGTCAACACTTTTCATGGTGCAGCAGATTATCAAGTTC  
 ACCAAGGAACTGCCCCCTTTTTCGGTCCCTACCCGTGGAGGACCAGATCTCCCTTC  
 15 TCAAGGGAGCAGCTGTGGAAATATTGCATATCTCACTCAACACTACTTTCTGTCT  
 TCAAACACAGAATTTCTTCTGTGGGCCACTTTGCTACAAAATGGAAGACGCAGCC  
 CACGCAGGGTTCCGGTACGAATATGTGGAGTTGATCTTTCGCTTCCATGGGACAC  
 TGAAGCGACTGCAGCTCCAAGAGCCTGAGTATGTGCTCATGACTGCCATGGCCCT  
 CTTCTCTCCTGACAGGCCTGGAATCACCCAGAGAGAAGAGATTGACCAGCTGCA  
 20 AGAGGAGATGGCACTGATTTTGAACAACACTACATTATGGAACAGCAGCCAAGGCC  
 CCAGAGTCGGTTTCTGTACGCAAAGCTGATGGGCCTGCTGGCTGAGCTCCGGAGC  
 ATAAACAATGCATACTCATATGAAATACGGCGCATCCAGGGACTGTCCGCTATG  
 ATGCCACTACTTGGGGAAATCTGCAGCTGAGGCTCAGGCTTGCCCTCCTTCCCCAG  
 GGCCCCTGGGATTCATTGGACTGGAAAGGGGAAATTGCTGAGCTAAAAGGAGCT  
 25 CAGTGACAGCAAAAAACACTGGACAGTNGGAAAAAANNNNNNNNNNNNAAA  
 AGCGACCTGCCCCGGGCGGCCGTTTCAGC

SEQ ID NO: 9- Predicted amino acid sequence of hamster CAR

30 MTATLTLETKASGEEYGPRNCVVCGRATGYHFHALTCEGCKGFFRRTVSKTISPICP  
 FSGSCEISRAQRRHCPACRLQKCLNAGMRKDMILSAEALSLRRARQAQRRRAQKASV  
 QMTQERKELVQTLIGAHTRHMGPMFDQFVKLRPPAYLFTHHRPSSPLVPPALPLLTH  
 FADVNTFMVQQIIFTKELPLFRSLPVEDQISLLKGAAVEILHISLNTTFCLQTQNFFCG  
 PLCYKMEDAAHAGFRYEYVELIFRFHGTLLKRLQLQEPEYVLMTAMALFSPDRPGITQ

REEIDQLQEEMALILNNYIMEQQPRPQSRFLYAKLMGLLAELRSINNAYSYEIRRIQG  
LSAMMPLLGEICS

SEQ ID NO: 10 - Oligo 2930

5 CCATAAACGTGTTGATATCTGCAAAGTGTGCGAGCAGAGGCAACACGGGGCCCC  
GAGG

SEQ ID NO: 11 - Oligo 2931

10 CTCTACAGCCTCCAGCCTATCTGTTCATGCATCACCGGCCTTTCCAGCCTCGGGGC  
CC